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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/622,963	07/17/2003	Thierry Quillet	229.023	4009
23598	7590	07/22/2004	EXAMINER	
BOYLE FREDRICKSON NEWHOLM STEIN & GRATZ, S.C. 250 E. WISCONSIN AVENUE SUITE 1030 MILWAUKEE, WI 53202			HYEON, HAE M	
			ART UNIT	PAPER NUMBER
			2839	

DATE MAILED: 07/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/622,963

Applicant(s)

QUILLET ET AL.

Examiner

Hae M Hyeon

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☒ Claim(s) 8-20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 January 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 1/20/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Priority***

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. FR-0209090, filed on January 20, 2004.

### ***Drawings***

2. The drawings are objected to because the cross sectional views of the drawings are not using appropriate cross-hatching lines for different materials such as wood, plastic, metal, and ceramic. Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

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3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the **plurality of wire strands** received in the tubular housing must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant

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will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Objections - 37 CFR § 1.75(d)***

5. The following is a quotation of an appropriate paragraph of 37 CFR 1.75:

(d) The claim or claims must conform to the invention as set forth in the remainder of the specification and the terms and phrases used in the claims must find clear support or antecedent basis in the description so that the meaning of the terms in the claims may be ascertainable by reference to the description. (See 1.58(a)).

6. Claims 8-20 are objected under 37 C.F.R. 1.75(d) because the present specification does not explain “**a conduit**” and “**a heat expansion coefficient.**” Although the present specification defined an interior surface of the tubular housing, the present specification never defined the interior surface of the tubular housing to be the conduit as recited in claims 8,15 and 18. Also, the present specification never defined the expansion coefficient to be one specific expansion coefficient such as a heat.

***Claim Objections***

7. Claim 1 is objected to because of the following informalities: Claim 1, line 5, the examiner suggests the applicant to insert -- of wire-- after “the strands.”

Appropriate correction is required.

8. Claims 15 and 17 are objected to under 37 CFR 1.75 as being a substantial duplicate of claims 9 and 13, respectively. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

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9. Claim 18 recites the limitation "the conduit" in line 7. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 112***

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

11. Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- Claim 1, line 2 recites, "the strands of wire **being realized** in a material ..." The phrase "being realized" is indefinite because the strands of wire either has its distinct property or it does not have. The property of wire is not realized to be something.

12. Regarding claim 7, the phrase "for example" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

***Claim Rejections - 35 USC § 102***

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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14. Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Yves et al (FR-2683396 A1).

Yves discloses a connecting device comprising strands of aluminum wire 11 crimped in a first end of an intermediate aluminum tube 4 and a copper contact element 1 fixed in force at a second end of the tube 4. Since the wire 11 is made of aluminum and the contact element 1 is made of copper, it is inherent that a dilation coefficient of the wire 11 is different from a dilation coefficient of the contact element 1. Also, it can be said that the tube 4 has rigidity similar to that of the contact element 4 since both are metal and the exact value of rigidity is not defined. Furthermore, the tube 4 has a dilation coefficient similar to that of the strands of wire since both are made of aluminum.

***Claim Rejections - 35 USC § 103***

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Derry (4,915,657).

Derry discloses a connecting device comprising strands of wire 26, an intermediate tube 20, and a contact element 14. A first end of the intermediate tube 20 is crimped around the strands of the wire 26 and a second end of the tube 20 is crimped around the contact element 14. However, Derry does not disclose the strands of wire having a dilation coefficient different from

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a dilation coefficient of the contact element 14, and the tube 20 having a rigidity similar to that of the contact element and having a dilation coefficient similar to that of the strands of wire. Since the dilation coefficient and the rigidity are properties of material, the use of materials having different dilation coefficient and the same rigidity only deals with the use of preferred materials. Also, the contact element being copper and the strands of wire and the tube being aluminum only deal with the use of preferred materials. It has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the connecting device taught by Derry such that it would have materials having different dilation coefficient or the same rigidity because it only deals with the use of preferred materials.

#### ***Allowable Subject Matter***

17. Claims 8-20 are objected.

18. The following is a statement of reasons for the indication of allowable subject matter: In combination with all the limitations recited in the independent claim, all the prior arts do not show a connector comprising a tubular housing having a first opening at one end for receiving one end of a stranded wire and having a necked down portion, and a second opening at its other end that communicates with the necked down portion for a friction fit with a contact. An interior surface of the tubular housing is lined with a ductile and electrically conductive material.



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***Conclusion***

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent No. 3,210,720 by Harris, Jr., US Patent No. 4,704,498 by Gregorac, US Patent No. 4,813,893 by Sindlinger, US Patent No. 5,399,110 by Morello et al., US Patent No. 5,408,743 by Tournier et al., US Patent No. 5,498,838 by Furman, US Patent No. 6,004,172 by Kerek, US Patent No. 6,015,953 by Tosaka et al., and US Patent No. 6,641,444 B2 by Hanazaki et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hae M Hyeon whose AU is 2839 and whose telephone number is 571-272-2093. The examiner can normally be reached on Mon.-Fri. (8:30-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn D Feild can be reached on 571-272-2092. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

**Any response to this action may be mailed to:**

**Commissioner for Patents**

**P.O. Box 1450**

**Alexandria, VA 22313-1450**

For additional information regarding this new address, which was effective May 1, 2003, see *Correspondence with the United States Patent and Trademark Office*, 68 Fed. Reg. 14332 (March 25, 2003).

Hae M Hyeon

Examiner

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hnh

hnh

Hae Moon Hyeon